## 299F TEST PROCEDURE

1. Bias and Balance Settings and Voltage Checks

Turn unit ON - watch carefully for any signs of voltage shorts. With bias pots (1k) still full ccw (from top of unit), check supply for 48 to 50. Now adjust balance pots (10k) for app. 25 volts from CETM each 1000/50 to ground. Adjust bias pots for .8 ma. current from each test point in the rear of the unit to ground Check tone control supply for 25V (±10%)

2. Sensitivity Check

a. Audio Oscillator ro EXTRA at .3 (±2 db) input. Connect 8 ohm load to Main speaker taps. Turn loudness pot to maximum. Observe output of 18 watts (12v). Check tape output jack with trouble shooting lead for the same output as input signal. At this point recheck bias for .8 ma.

b. Audio Oscillator to Tuner at .35 (±2 db) input. Connect 8 ohm to Main Speaker taps. Turn Loudness pot to maximum. Observe Output of 18 watts (12v).

3. Distortion Check

At 12v output, max. distortion .6%.

4. Tape Monitor Switch Check

Audio Oscillator to EXTRA at .3 input to L channel. Note output at left channel speaker terminal. Put Tape Monitor switch in the IN position. Note loss of output. Connect cable from L channel tape out to L channel tape in. Note restoration of signal out. Repeat process for R channel then return tape monitor to OUT position.

5. Speakers Switch Check and Phone Jack Check

Speakers switch to OFF position. Note complete loss of signal. Loudness to min., insert phone plug to phone jacks, remove speaker leads and connect to phone plug leads. Loudness to max., note drop of 26 ±2 db. Switch main speakers on, note restoration of signal. Switch remote speakers on, note drop in outout of 1 to 2 db. Repeat for remote speaker terminals.

6. Crosstalk and Stereo Switch Check

At 1kc, turn loudness pot to #10 flat - return input voltage to .3. Mono-Stereo switch to Stereo. Balance switch to bal. L, note drop of 0 db. Balance switch to bal. R, note additional drop of 50 db. Return input voltage to previous setting Loudness pot to max., output to 0 db on 1v scale.

7. Tone Control Check ("0" db 1v scale)

| Bass | | Treble | |
|---|---|---|---|
| Boost | 10 db ± 2 db | Boost | 10 db ± 2 db |
| Cut | 15 db ± 2 db | Cut | 10 db ±2 db |

8. Frequency Response Check — 3 db down @ 20 cps or lower; 3 db down @ 30 kc

9. Regulation Check

At 1 kc, load out - output rise 1 db maximum

10. Noise Filter Check

At 5 kc noise filter to "in" note 4 ±2 db drop.

11. Preamp Gain Check

Attenuate input 35 db from .3 at 1 kc input switch to phono high, input leads to phono, note output of 12v. Attenuate 5 db more, input switch to phono low, note 12v output.

12. Preamp Frequency Response Check

a. Tuner
3 db down @ 20 cps or lower, 1 db down @ 15 kc.
Sharp drop off beginning @ 17 to 20 kc bottoming at 35 to 38 kc (approx. 40 db down).

b. Phono

| | |
|---|---|
| 1 kc | 0 db (REF.) |
| 10 kc | -12 ±2 db |
| 100 cps | +13 ±2 db |

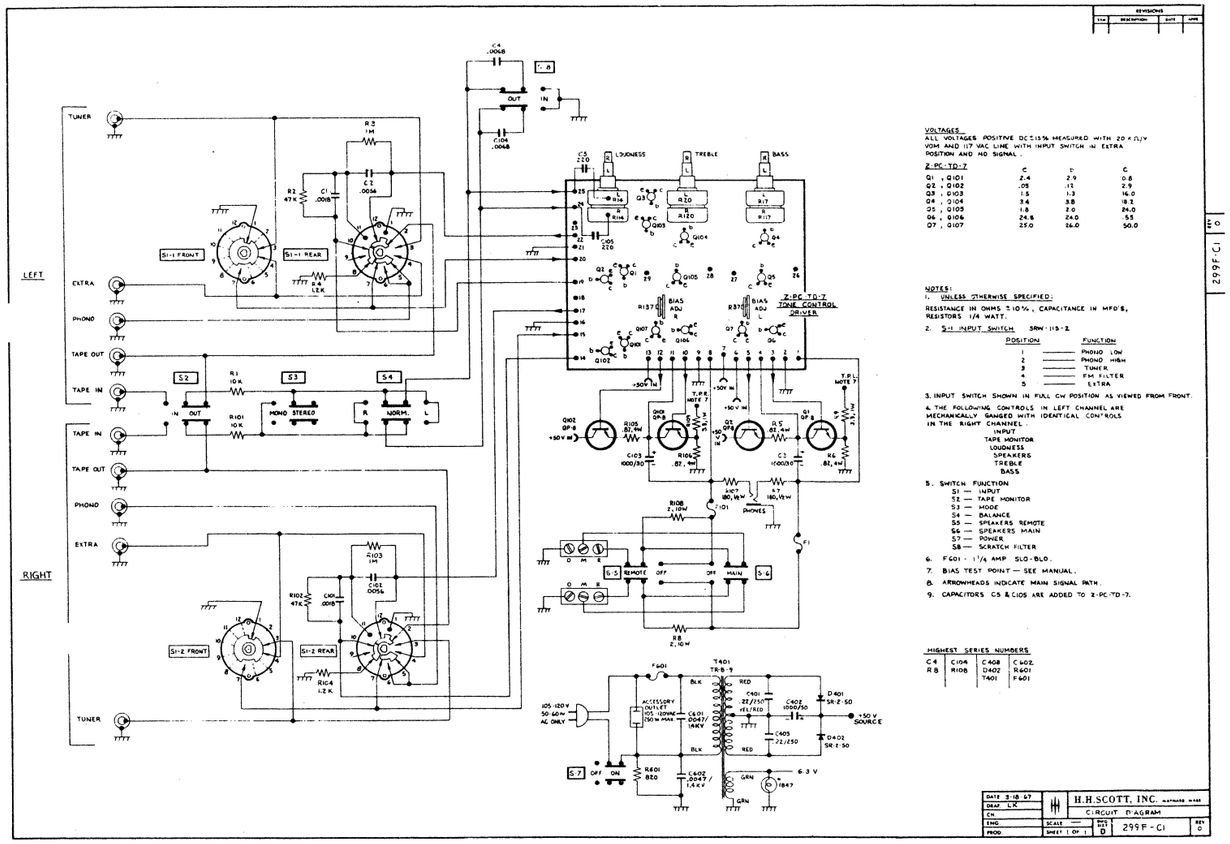
13. Hum Checks

| Position | Loudness Pot | Max. Hum |
|---|---|---|
| Extra | 0 | 3 mv |
| Extra | 10 | 5 mv |
| Phono High | 10 | 30 mv |
| Phono Low | 10 | 30 mv |
| Tuner | 10 | 10 mv |

14. Repeat Steps 2 through 13 for R channel.

**H. H. SCOTT, INC.**
111 POWDER MILL RD., MAYNARD, MASS., 01754

# SERVICE BULLETIN
# FOR
# MODEL 299S SOLID STATE STEREO AMPLIFIER

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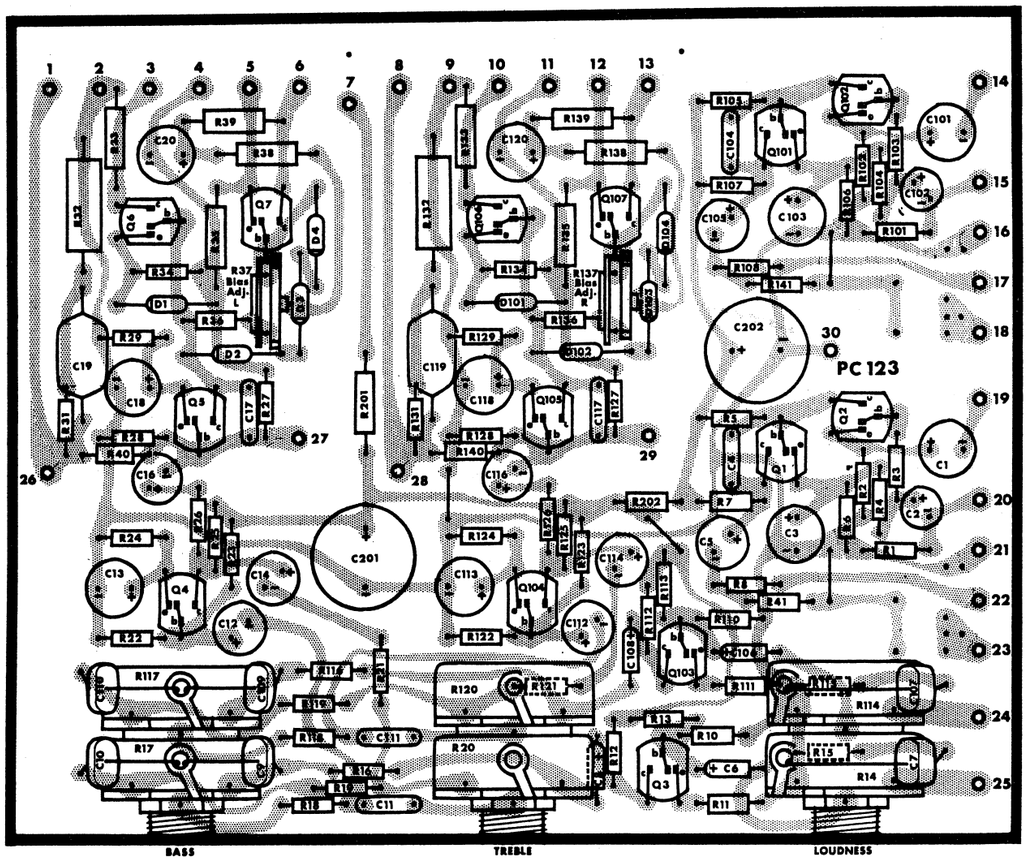
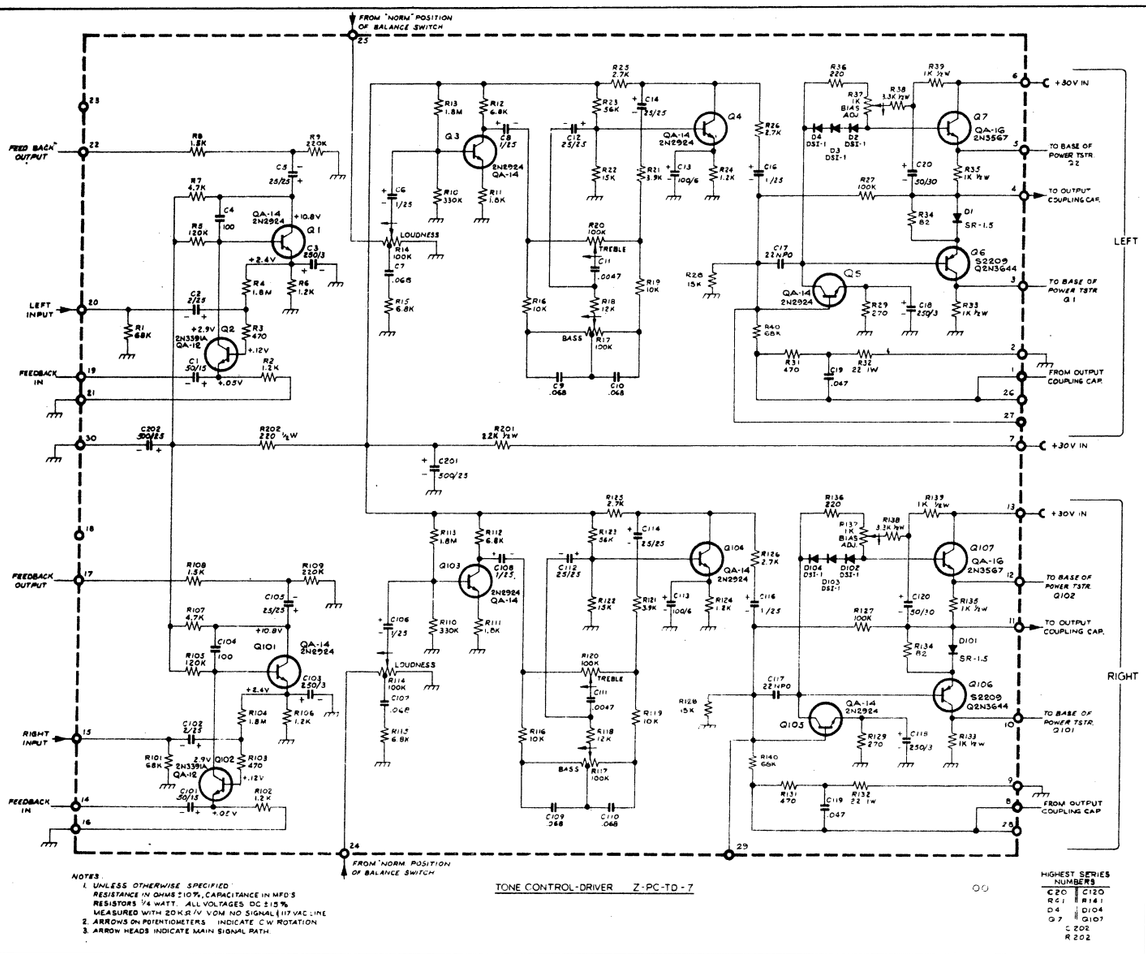



Q1 Q101 — QA-14
Q2 Q102 — QA-12
Q3 Q103 Q4 Q104 — QA-14
Q5 Q105 — QA-16
Q6 Q106 — QA-11
Q7 Q107 — QA-10

**TONE CONTROL - DRIVER Z-PC-TD-7** 00

Z-PC-TD-7 REV. 1




NOTES
1. UNLESS OTHERWISE SPECIFIED
RESISTANCE IN OHMS ±10%, CAPACITANCE IN MFD'S
RESISTORS ½ WATT. ALL VOLTAGES DC ±5%
MEASURED WITH 20K Ω/V VOM NO SIGNAL 117 VAC LINE
2. ARROWS ON POTENTIOMETERS INDICATE C.W ROTATION
3. ARROW HEADS INDICATE MAIN SIGNAL PATH

TONE CONTROL-DRIVER Z-PC-TD-7 00

HIGHEST SERIES NUMBERS

| | |
|---|---|
| C20 | C120 |
| R61 | R141 |
| D4 | D104 |
| Q7 | Q107 |
| C202 | |
| R202 | |

| REVISIONS | | | |
|---|---|---|---|
| SYM | DESCRIPTION | DATE | APPD |
| 1 | ECO 1486 & | 2/16/67 | CAP |

DATE 2-8-67
DRAFT
CH
ENG
PROD

H.H.SCOTT, INC. MAYNARD, MASS.
CIRCUIT DIAGRAM
SCALE —
SHEET 1 OF 1
SIZE D
Z-PC-TD-7
REV 1